

**Appl. No. 10/049,976**

**Amdt. dated March 11, 2004**

**Reply to Office Action of December 19, 2003**

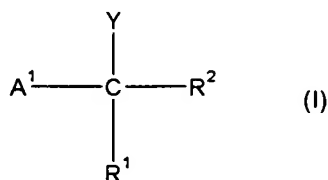
**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1-9 (Canceled)

10. (New) A method of combating phytopathogenic fungi at a locus infested or liable to be infested therewith, which comprises applying to the locus a compound of the general formula I:



wherein:

A<sup>1</sup> is 2-pyridyl substituted with from one to four moieties independently selected from the group consisting of halogen and haloalkyl, provided that at least one moiety is haloalkyl;

Y is a moiety selected from the group consisting of -L-A<sup>2</sup> and -L<sup>1</sup>-A<sup>3</sup>

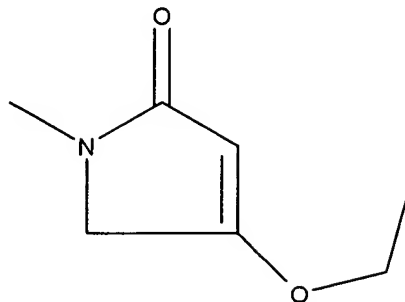
wherein:

A<sup>2</sup> is selected from the group consisting unsubstituted or substituted phenyl, naphthyl, cyclopropyl, cyclohexyl, biphenyl, thienyl, imidazolyl, toyl, and

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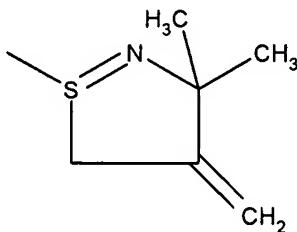
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wherein:

any substituents on A<sup>2</sup> are independently selected from the group consisting of alkyl, halogen, haloalkyl, phenoxy, alkoxy, nitro, acetyl, -PhSO<sub>2</sub>, -NMe<sub>2</sub>, -MeSO<sub>2</sub>, -MeS, and -PrSO<sub>2</sub>;

A<sup>3</sup> is selected from the group consisting unsubstituted or substituted phenyl, biphenyl, benzoyl, benzyloxycarbonyl, isopropoxycarbonyl, benzoxazolyl, pyridyl, 2-pyridyl, thiodiazolyl, triazolyl, fluorenyl, tolyl, tetrazolyl, pyrimidinyl, imidazolyl, benzthiazolyl, quinolinyl, and



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wherein:

any substituents on A<sup>3</sup> are selected from the group consisting of alkyl, halogen, haloalkyl, hydroxyl, and phenyl;

L is a 3-atom linker selected from the group consisting of -N(R<sup>5</sup>)C(=X)N(R<sup>6</sup>)-, -N(R<sup>5</sup>)C(=X)CH(R<sup>3</sup>)-, -CH(R<sup>3</sup>)N(R<sup>5</sup>)CH(R<sup>4</sup>)-, -CH(R<sup>3</sup>)N(R<sup>5</sup>)C(=X)-, -ON(R<sup>5</sup>)C(=X)-; wherein the left hand side of L is attached to the central carbon atom of formula I;

L<sup>1</sup> is a 4-atom linker selected from the group consisting of -N(R<sup>9</sup>)C(=X)X<sup>1</sup>CH(R<sup>7</sup>)-, -N(R<sup>9</sup>)C(=X)CH(R<sup>7</sup>)CH(R<sup>8</sup>)-; -N(R<sup>9</sup>)C(R<sup>7</sup>)=C(R<sup>8</sup>)C(=X)-, -N(R<sup>9</sup>)C(=X)C(R<sup>7</sup>)(R<sup>8</sup>)SO<sub>2</sub>-, and -N(R<sup>9</sup>)C(=X)C(R<sup>7</sup>)(R<sup>8</sup>)X<sup>1</sup>; wherein the left hand side of L<sup>1</sup> is attached to the central carbon atom of formula I;

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>7</sup>, and R<sup>8</sup> are independently selected from the group consisting of halogen, R<sup>b</sup>, and OR<sup>b</sup>;

R<sup>5</sup> and R<sup>6</sup>, which may be the same or different, are R<sup>b</sup>;

R<sup>b</sup> is selected from the group consisting of hydrogen, alkyl, and acyl;

X is selected from the group consisting of oxygen and sulfur;

X<sup>1</sup> is selected from the group consisting of oxygen and -N(R<sup>9</sup>)-;

R<sup>9</sup> is R<sup>b</sup>;

or a complex or salt thereof.

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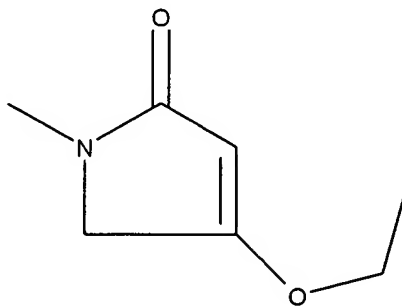
11. (New) The method of claim 10 wherein the compound is applied at an application rate of from 5 to 1000 grams per hectare.

12. (New) A fungicidal composition comprising one or more compounds as defined in claim 10, or a complex or salt thereof, in admixture with an agriculturally acceptable diluent or carrier.

13. (New) A compound of formula I as defined in claim 10 or a complex or salt thereof wherein:

A<sup>1</sup> is 2-pyridyl substituted with from one to four moieties independently selected from the group consisting of halogen and trifluoromethyl, provided that at least one moiety is trifluoromethyl;

A<sup>2</sup> is selected from the group consisting of unsubstituted or substituted phenyl, cyclohexyl, cyclopropyl, thienyl, imidazolyl, tolyl, and



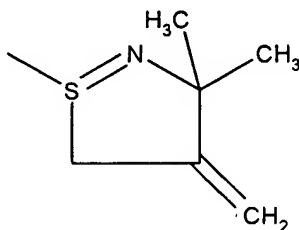
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wherein any substituents on A<sup>2</sup> are independently selected from the group consisting of alkyl, halogen, and haloalkyl;

A<sup>3</sup> is selected from the group consisting of unsubstituted or substituted phenyl, pyridyl, 2-pyridyl, thiodiazolyl, triazolyl, fluorenyl, tolyl, tetrazolyl, pyrimidinyl, imidazolyl, benzthiazolyl, quinolinyl, and



wherein any substituents on A<sup>3</sup> are selected from the group consisting of alkyl, halogen, haloalkyl, hydroxyl, and phenyl;

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are independently selected from the group consisting of hydrogen or alkyl;

R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, and R<sup>8</sup> are independently selected from the group consisting of hydrogen, alkyl, and acyl; and

R<sup>9</sup> is selected from the group consisting of hydrogen and alkyl.

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14. (New) A compound of formula I as defined in claim 10 or a complex or salt thereof wherein Y is -L-A<sup>2</sup>-

wherein:

A) L is -NHC(=X)NH-; and

A<sup>2</sup> is selected from the group consisting of:

1) phenyl, optionally substituted by halogen, haloalkyl, phenoxy, alkoxy, alkyl, nitro, -MeS, -PhSO<sub>2</sub>, dialkylamino, alkylsulfonyl, benzylsulfonyl, S(phenyl substituted by halogen); and

2) cyclopropyl, cyclohexyl, and naphthyl, each of which is optionally substituted by nitro; or

B) L is -NHC(=O)CH(R<sup>3</sup>)-;

wherein R<sup>3</sup> is selected from the group consisting of hydrogen, alkyl, halogen, and acyloxy; and

A<sup>2</sup> is selected from the group consisting of:

1) phenyl, optionally substituted by halogen, nitro, or alkoxy;

2) thienyl;

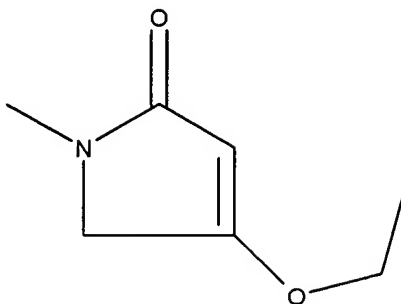
3) imidazolyl; and

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4)



C) L is  $-\text{CH}(\text{R}^3)\text{N}(\text{R}^5)\text{CH}_2-$

wherein:

$\text{R}^3$  is N-alkylcarbamoyl or alkoxycarbonyl; and

$\text{R}^5$  is hydrogen or acyl; and

$\text{A}^2$  is selected from the group consisting of

1) phenyl, optionally substituted by alkyl, alkoxy, halogen, nitro, haloalkyl, or phenoxy; and

2) naphthyl; or

D) L is  $-\text{CH}(\text{R}^3)\text{NHC}(=\text{O})-$ ;

wherein  $\text{R}^3$  is N-alkylcarbamoyl or alkoxycarbonyl; and

$\text{A}^2$  is selected from the group consisting of:

1) phenyl, optionally substituted by alkoxy, halogen, nitro, haloalkyl, phenoxy, or phenyl; and

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2) cycloalkyl; or

E) L is -O-NHC(=O)-; and

A<sup>2</sup> is phenyl substituted by alkyl;

or Y is -L<sup>1</sup>-A<sup>3</sup>- wherein:

A) L<sup>1</sup> is -NHC(=O)(CH<sub>2</sub>)<sub>2</sub>- and A<sup>3</sup> is phenyl substituted by alkyl; or

B) L<sup>1</sup> is -NHC(=S)NHCH<sub>2</sub>-, and A<sup>3</sup> is phenyl; or

C) L<sup>1</sup> is -NHC(=O)CH(alkyl)S- and A<sup>3</sup> is phenyl; or

D) L<sup>1</sup> is selected from the group consisting of:

1) -NHC(=O)OCH<sub>2</sub>-,

2) -NHC(=O)(CH<sub>2</sub>)<sub>2</sub>-,

3) -NHC(=O)NHCH<sub>2</sub>-,

4) -NHC(=S)NHCH<sub>2</sub>-,

5) -N(alkyl)C(=O)CH<sub>2</sub>O-, and

6) -NHC(=O)CH<sub>2</sub>O-;

R<sup>1</sup> is hydrogen;

R<sup>2</sup> is selected from the group consisting of hydrogen and alkoxy carbonyl;

A<sup>3</sup> is selected from the group consisting of:

1) phenyl, optionally substituted by halogen, alkyl, phenyl, or hydroxyl;

2) fluorenyl;

3) pyridyl, optionally substituted by halogen or haloalkyl;

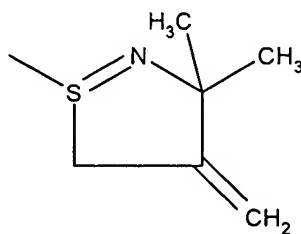


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- 4)     thiadiazolyl substituted by alkyl;
- 5)     benzthiazolyl, optionally substituted by halogen or by phenyl substituted by  
halogen;
- 6)     quinolinyI substituted by haloalkyl;
- 7)     triazolyl substituted by alkyl or phenyl;
- 8)     tetrazolyl substituted by alkyl or cycloalkyl;
- 9)     pyrimidmyl substituted by alkyl;
- 10)    benzoxazolyl;
- 11)    imidazolyl substituted by alkyl; and
- 12)



or

E)     L<sup>1</sup> is -NHC(=O)CHCR<sup>8</sup>)R<sup>9</sup>)-;

R<sup>1</sup> is hydrogen;

R<sup>2</sup>, R<sup>8</sup>, and R<sup>9</sup> are independently selected from the group consisting of hydrogen  
and alkyl; and

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A<sup>3</sup> is selected from the group consisting of

1) benzoyl optionally substituted by alkyl, ans

2) benzyloxycarbonyl; or

F) L<sup>1</sup> is -NHC(=O)CH(alkyl)SO

R<sup>1</sup> and R<sup>2</sup> are each hydrogen; and

A<sup>3</sup> is phenyl.